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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,989	06/01/2001	Daniel C. Biederman	CISCP208/3890	3150

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EXAMINER

OSMAN, RAMY M

ART UNIT PAPER NUMBER

2157

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,989

Applicant(s)

BIEDERMAN ET AL.

Examiner

Ramy M Osman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 4 and 5 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term "total flows" has not been described in the specification in regards to its relation of setting a timer.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 7-12 rejected under 35 U.S.C. 102(e) as being anticipated by anticipated by Malagrino et al. (US Patent No 6,714,985).

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The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. In reference to claim 1, Malagrino teaches a method for combining data segments, the method comprising:

at a combiner node, receiving data segments from a first node that are destined for a second node; at the combiner node, combining and buffering the received data segments with previously buffered data segments from the first node if present until a first condition is met; at the combiner node, sending at least a portion of the combined data segments to the second node when the first condition is met, wherein the received data segments are combined in the combiner node prior to being sent to the second node so as to reduce processing and/or storage resources consumed by the second node.

(Summary, column 6 lines 1-25 and column 7 lines 30-67)

6. In reference to claim 2, Malagrino teaches a method as recited in claim 1, wherein the first condition is met when a combiner timer expires. (column 3 lines 55 – column 4 line 25 and column 8 lines 30-67)

7. In reference to claim 3, Malagrino teaches a method as recited in claim 2, further comprising:

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waiting a predetermined amount of time and then determining whether there is congestion between the combiner node and the second node; and when it is determined that there is congestion increasing or resetting the combiner timer. (column 9 lines 5-67)

8. In reference to claims 4 and 5, Malagrino teaches a method as recited in claim 2, further comprising: when a number of total flows received into the combiner node changes, setting the combiner timer based on the number of total flows. (column 9 line 5 – column 10 line 55)

9. In reference to claim 7, Malagrino teaches the method as recited in claim 1, wherein the first condition is met when a data length of at least a portion of the combined data is less than or equal to a window size indicated by the second node, wherein a maximum portion of the combined data that will fit within the indicated window size is sent to the second node. (column 5 line 45 – column 6 line 45)

10. In reference to claim 8, Malagrino teaches the method as recited in claim 1, wherein data that is traveling between the first node and the second node has a first maximum data size and data that is traveling between the combiner node and the second node has a second maximum data size, the first maximum size being substantially smaller than the second maximum data size, wherein the combined data segments sent to the second node have an associated size that is less than or equal to the second maximum data size. (column 5 line 45 – column 6 line 45)

11. In reference to claim 9, Malagrino teaches the method as recited in claim 8, wherein the first and second maximum data size are selected from a group consisting of a first and second window size, a first and second maximum segment size, and a first and second maximum transmission unit. (column 5 line 45 – column 6 line 45)

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12. In reference to claim 10, Malagrino teaches the method as recited in claim 1, further comprising:

at the combiner node, receiving data from the second node that is destined for the first node; at the combiner node, splitting the received data into a plurality of segments; at the combiner node, sending the segments to the first node; and wherein the received data is segmented in the combiner node prior to being sent to the first node so as to reduce processing and/or storage resources consumed by the second node. (Summary, column 6 lines 1-25 and column 7 lines 30-67)

13. In reference to claim 11, Malagrino teaches the method as recited in claim 1, wherein the first condition is met when a last segment belonging to a same data group that was fragmented is received, wherein the combined data that is sent to the second node includes all of the segments of the same fragmented data group. (column 2 lines 30-67 and column 10 lines 30-67)

14. In reference to claim 12, Malagrino teaches the method as recited in claim 1, further comprising:

when out-of-order data segments are received, buffering the received out-of-order data segments with previously buffered data segments from the first node if present until missing data segments are received; and reordering the out-of-order data segments after missing data segments are received prior to combining the re-ordered data segments with previously buffered data segments. (Summary, column 8 line 30 – column 9 line 25)

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 6, 13-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Malagrino et al. (US Patent No 6,714,985) in view of Borella et al (US Patent No 6,643,259).

17. Malagrino teaches the method as recited in claim 1 above. Malagrino fails to explicitly teach wherein the method further comprises sending the received data substantially immediately without the first condition being met to the second node when the received data has a relatively high priority; and wherein the received data has a relatively high priority based on information contained in the received data. However, Borella teaches forwarding a packet having a high priority indicating that low delay is required for optimizing data flow in a data network (Abstract and column 6 lines 30-67).

It would have been obvious for one of ordinary skill in the art to modify Malagrino by forwarding packets having a high priority indicating that low delay as per the teachings of Borella for optimizing data flow in a data network.

18. Claims 17-35 do not teach or define any new limitations above claims 1-16 as mentioned above and are therefore rejected for similar reasons.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramy M Osman whose telephone number is (703) 305-8050. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RMO
August 19, 2004



SALEH NAJJAR
PRIMARY EXAMINER